FW

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,732	02/26/2002	Hiroaki Nemoto	ASA-1074	3964

24956 7590 07/13/2005

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.
1800 DIAGONAL ROAD
SUITE 370
ALEXANDRIA, VA 22314

EXAMINER	
PSITOS, ARISTOTELIS M	
ART UNIT	**PAPER NUMBER**
2653	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/069,732	NEMOTO ET AL.	
	Examiner	Art Unit	
	Aristotelis M. Psitos	2653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-11* is/are pending in the application.

4a) Of the above claim(s) *10 and 11* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3 and 5-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2002* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The IDS of 5/2/02 has been received and made of record.

Applicants' Response

Applicants' response of 4/26/05 has been considered with the following results.

Claims 10 and 11 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/26/05.

Drawings

Figure s 1-4 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

1. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In particular, the limitation with respect to the optical element as recited in lines 6-10 is not understood. What limitation(s) is/are applicants attempting to define?

As far as the claims are interpreted and understood, the following position(s) is/are taken.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless–
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the

examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by JP 11-096608. The US patent to Nakajima et al (6317280) is the US equivalent and relied upon in the rejection below.

The following analysis is made;

claim 1	Nakajima et al
An information recording/reproducing method, comprising the steps of:	see title/abstract
applying a magnetic field to form a magnetic recording domain whose magnetic wall orientation is along thermal distribution direction, while heating partially a recording medium for storing an information with the recording magnetic domain of a magnetic recording layer on a substrate surface, and	see figs. 13/14 and their description
scanning on the recording medium so that a magnetic flux from the magnetic recording domain is detected to reproduce by a magnetic flux detecting means whose long magnetic domain is in accord with the magnetic wall orientation of the magnetic recording domain.	see fig. 14 and its description

As far as the examiner can ascertain from the above noted figures and their associated disclosure, the claimed steps of claim 1 are present. Note that the phrase "whose long magnetic domain is in accord with the magnetic wall orientation of the magnetic recording domain" is interpreted as being present since without such an accordance, recording/reproducing would result in a deterioted signal.

3. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over either the acknowledged prior art of figures 1-4 or the above noted JP system as relied upon in paragraph 2 further considered with Fuji et al or alternatively the Nakajima/prior art system further considered with Fuji et al and Kojima et al.

The following analysis is made:

Claim 2	Either the acknowledge prior art/fig. 1 JP/US Nakajima et al system/see Identification as noted above
An information recording/reproducing apparatus for a recording medium for storing an information with a recording magnetic domain in a magnetic recording layer formed on a substrate, comprising,	see title/abstract
heating means for heating partially the recording medium,	heating means present - see figure 1, head 4 – col. 6 lines 15-55
magnetic field applying means for applying a magnetic field to the vicinity of an area heated by the heating means, and	such present fig. 1 head 2
magnetic flux generating means for detecting a magnetic flux with scanning on the recording medium,	such present fig. 1 head 3
characterized in that a tracking position of the heating means is changed relatively with respect to	see secondary reference as analyzed below

a tracking position of the magnetic flux detecting means, in accordance with a radial position of track scanned on the disk.

As noted in the above analysis, the JP/US system to Nakajima et al provides for the overall structure recited in claim 2, with the exception of the ultimate paragraph.

The secondary reference to Fuji et al, - see figure 11 for instance provides for appropriate tracking control capability - see elements 78 and 79. Due to the relative displacements between the heating element and the magnetic flux detecting, the examiner interprets the ultimate paragraph limitation to be met – i.e., the tracking position of the heating element – as further noted in figure 11 is changed relatively with respect to tracking position of the magnetic flux detecting means in accordance with the tracking position.

Alternatively, as noted in figure 10 in the Kojima et al system, the heating element is separately located with respect to the transducer element 2 and hence the tracking position of such is changed relatively with respect to the detecting element.

It would have been obvious to modify the base system of Nakajima et al with the above teaching from either Fuji et al or Fuji et al and Kojima et al, motivation is to provide for the appropriate tracking capability to the heating element so as to ensure proper signal conditions for recording/reproducing.

4. Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by either the acknowledged prior art or the Nakajima et al of Fuji et al references.

The elements recited are deemed present in either the acknowledged prior art figure 1 of the disclosure, Nakajima et al – figures 1 or 12, or Fuji et al – see figure 4 for instance.

With respect to the phrase

"characterized in that a shape of the area of the magnetic recording medium heated by the heating means rotates in accordance with a rotational direction of the swing arm,

and a longitudinal direction of the heated area by the heating means is substantially parallel

to a longitudinal direction of the magnetic flux detecting means". Such is considered an inherent result of the above noted systems – see the further discussion of such as found in the discussion of figures 2-3 in Lee et al.

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claims 3 and 2 respectively as stated in the paragraphs above, and further in view of Novotny et al.

The following analysis is made:

Claim 6	
An information recording/reproducing apparatus according to claim 3, characterized in that a tracking position of the heating means is changed relatively with respect to a tracking position of the magnetic flux detecting means, in accordance with a radial position of a track scanned on the disk.	Novotny et al - abstract/title col 4 lines 20-37.

It would have been obvious to modify the base system of any of the primary references with the additional teaching from Novotny et al, motivation is to accurately scanned the appropriate surface area.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 3 above, and further in view of JP 05-298737.

The ability of having a test-write and test read in this environment is taught by the JP reference to Kirino et al – see the abstract for instance.

It would have been obvious to modify the base system as relied upon with respect to claim 3 in paragraph 4 with the additional teaching from the JP document, motivation is to provided for the reduction as stated in the abstract of the JP document.

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the art as applied to claim 2 above, and further in view of Yonezawa et al.

As interpreted by the examiner, the limitation of claim 8 is disclosed in the application as being present in the Yonezawa et al system.

It would have been obvious to modify the base system as relied upon above with respect to claim 2 as stated in paragraph 3 above, motivation is to provide for the appropriate servo capability.

With respect to the limitation of claim 9 :

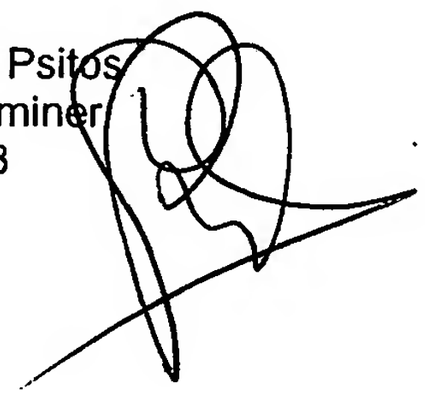
" characterized in that an angle of the recess-and-projection structure with respect to the track direction is substantially in accord with an angle of the magnetic flux detecting means with respect to the track direction, at each position on the recording medium ". Such occurs when the system operates in order to record the appropriate servo information – see also Novotny et al – the spiral shaped tracks in figures 4b and 4c.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M. Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653



AMP